address different aspects of the event, including registration, speakers, food, decorations, communication, parking, arts and crafts, vendor exhibits, activities, educational sessions, and budget and funding. The event was a celebration of life for BMT survivors and was registered with the National Cancer Survivor's Day Organization 17th National Observance of Survivors. It was a forum for survivors to share their experiences and stories and provided an opportunity to acknowledge the contribution of families, friends, BMT researchers, and health care providers who are dedicated to supporting BMT cancer survivors in their fight for life. Our program theme was "Survivor's Island," with decorations of palm trees and other island decor. The volunteers and committee members donned matching mango shirts and greeted the attendees with leis, goodie bags, and Survivors' Day t-shirts as they arrived. Attendees enjoyed popcorn, food, and a cake in their honor. Vendors lined the hallways with their exhibits. An arts and crafts room provided the survivors an opportunity to place their special mark on 2 canvases that will forever capture their special day. With the help of our institution's Volunteer Endowment for Patient Support Program, donations from local businesses, and physician and staff contributions, we were able to provide a fun-filled program that concluded with many gifts given away to our guests. With the endless support of so many, this event recognized our active, productive BMT survivor population and was the first of what we envision to be an annual celebration for the BMT program.

301

ADENOVIRUS INFECTION IN PEDIATRIC BONE MARROW TRANSPLANTATION: NURSING CONSIDERATIONS

Stokyhuzen, A., Frey, M., Prasad, V. The Duke Pediatric Stem Cell Transplant Program, Durham, NC.

Adenovirus is widely recognized as a significant cause of morbidity and mortality in the pediatric bone marrow transplantation population. Allogeneic and stem cell transplantation are additional risk factors that negatively impact patient outcomes. Adenovirus is a common DNA virus that accounts for 5%-10% of pediatric febrile illnesses. Most children will be infected by one of the adenovirus serotypes by age 5 years. For the healthy child, symptoms are generally mild. In the immunocompromised patient, infection can range from asymptomatic shedding of the virus to fatal disease. Mortality in the immunosuppressed host can range from 50% to 60%. Risk factors attributed to a higher risk of invasive or disseminated disease are age, allogeneic transplantation, GVHD, and 2 or more positive culture sites. Adenovirus viremia is associated with severe disease and can lead to pneumonia, gastroenteritis, hepatitis, cystitis, myocarditis, and encephalitis. Diagnosis of adenovirus can be made by serology, viral culture, shell viral culture, electron microscopy, PCR, or immunostain. Treatment for adenovirus remains variable and is not standardized at present. Ribavirin, gancyclovir, IVIG therapy, and, most recently, cidofavir are available as treatment options. The virus is spread easily by droplets or via the fecal-oral route. Health care professionals, visitors, and families need the education and diligence to adhere to all institutional and CDC infection control guidelines. The purpose of this abstract is to (1) describe the pathophysiology of adenovirus in the immunocompromised host, (2) describe the clinical symptoms of infection and severe disease, (3) outline the current diagnostic tests used in adenovirus detection, (4) review the current treatment options for adenovirus, and (5) describe infection control and nursing practices that are used in the care of these patients.

302

THE SAFE ADMINISTRATION OF UNDILUTED ETOPOSIDE IN THE PEDIATRIC BLOOD AND MARROW TRANSPLANTATION PATIENT

Fisher, V.L., Kistler, K., Rowbottom, L., Hegyi, K., Heinrich, M. Rainbow Babies and Children's Hospital, Cleveland, OH.

Blood and marrow transplantation (BMT) is successfully used to treat malignant and nonmalignant diseases and disorders. The delivery of the preparative regimen requires a strong knowledge base that includes the expertise in the administration of chemotherapy and side effects. We report the administration of undiluted etoposide (Bedford Laboratories, Bedford, OH) in our transplantation program with minimal complications. In our series of patients, the decision to use undiluted etoposide was made due to restrictive fluid parameters and the patient's condition. We have used undiluted etoposide in 5 pediatric BMT patients. All patients had a central venous access device for the administration of the chemotherapy agent. All patients received their chemotherapy via a syringe pump. To prevent disintegration of the tubing during the administration of undiluted etoposide, all patients had a "dry" connection from the syringe pump to the syringe tubing and to the CVAD access port. All patients had vital signs taken per our policy of every 15 minutes for the first hour of the infusion, then every 30 minutes for the second hour of the infusion, then hourly until the infusion was completed, and then every 4 hours. All patients had emergency medications readily available during the etoposide infusion. All patients received undiluted etoposide as a 4-hour infusion; in 2 of the 5 patients the infusion time was increased due to grade 2 hypotension, which recovered by temporarily stopping the infusion. Our experience suggests that undiluted etoposide can be safely administered in pediatric BMT patients.

303

UTILIZING THE TOWN MEETING FORUM TO INVOLVE CAREGIVERS OF PEDIATRIC PATIENTS UNDERGOING BONE MARROW AND STEM CELL TRANSPLANTATION

Talbert, G., Frey, M.A. Duke University Medical Center, Durham, NC.

Caregivers of children undergoing bone marrow and stem cell transplantation face unique and significant challenges. The average length of stay for patients on the Duke Pediatric Stem Cell Transplantation Unit is often several months. Caregivers are required to leave their homes and extended families in hope of a life-saving transplantation for their child. They enter a strange environment over which they have very little control. Parents often report feelings of "helplessness" and "being at the mercy of others" during this difficult period of time.

In 2003 the Duke Pediatric Stem Cell Transplant inpatient unit developed a weekly Town Meeting Program to address the needs of caregivers during the inpatient phase of transplantation. Each week the medical, nursing, and support teams hold a 1-hour informal meeting on the inpatient unit to specifically address the needs of the families. These meetings were created to provide a relaxed forum in which caregivers are free to discuss issues and make improvements on the unit. Caregivers can voice concerns, provide positive feedback, and request assistance in problem-solving. The town meeting also serves as a forum for the clinical team to share ideas and monitor the overall morale of the caregivers. All families also receive the services of the social work team for personal issues and concerns. This forum has greatly improved parent satisfaction on the unit.

The purpose of this abstract is to share The Duke Pediatric Stem Cell Transplantation Unit town meeting design with other transplantation centers, including (1) design and implementation of the initial forum; (2) who, where, and when—which staff to involve, where to hold meetings and the best time for them; (3) successful facilitation of the town meeting; and (4) keeping the momentum—how to keep the meeting fresh and productive.

304

EMPOWERING BMT NURSES TO SPEAK UP AND BE HEARD

Rivera, Z.R., Neumann, J.L. University of Texas M.D. Anderson Cancer Center, Houston, TX.

Treatment with blood and marrow transplantation (BMT) can be overwhelming, and pretreatment patient expectations can be high. Caring for BMT patients involves a multidisciplinary approach. Development of multidisciplinary teams allow for communication of the treatment plan including medicine, pharmacy, psychosocial, and rehabilitation aspects of care and discussion of expectations as the treatment progresses. Having all disciplines involved contributes to the most beneficial outcome for the patient.

Addressing ongoing patient concerns with the entire team can be problematic on a busy 52-bed inpatient BMT unit. Two methods that have been successfully initiated are long-term care conferences, where multiple patients are discussed, and formal individual patient care conferences. Instituted by the nursing staff with input from the ethics committee, the long-term weekly conferences allow all disciplines to be involved in a discussion of a group of BMT patients with unique problems that affect quality of life, discharge plan, and overall outcome. Patients selected to be presented on the basis of length of stay (> 50 days), unresolved/prolonged acute complications, and patient/family concerns. The clinical nurse provides pertinent details about the patient's history, which can assist in developing criteria for patient-directed objectives in the plan of care.

Formal care conferences are designed to include not only the interdisciplinary team, but also the patient/family in keeping everyone informed about a formalized plan of care and expectations for the patient. Care conferences are an avenue that affords the nurses an opportunity to advocate on the patient's behalf when various factors indicate a need for discussion to revise the previous plan of care. A sample care conference will be presented demonstrating steps initiated to develop a plan of care for a specific BMT patient and its end result.

305

TOOLS TO ASSIST WITH THE MEDICATION MANAGEMENT OF HOSPITALIZED BMT PATIENTS

Grill, K., Mishaw, K. University of Texas M.D. Anderson Cancer Center, Houston, TX.

The medication regiment of a bone marrow transplantation (BMT) patient is unlike most other cancer patients. The number of medications can be extensive and complicated. Many of the patients have anywhere from 15 to 20 medications at scheduled intervals throughout a 24-hour period. One of the challenges to the inpatient nurse is to administer the number of medications in a safe and timely manner. New RN graduates on the BMT floor recognized the need for a quick-reference compatibility chart for the common medications given. The goal was to provide a quick reference chart for both experienced nurses and new graduates.

The decision to create a quick-reference chart was based on the time-consuming method of searching through the MDACC formulary handbook and the online medication databases. Drug compatibility information is located in the online medication database on MDACC computer systems. However, these systems are not always complete and at times are down, leaving the information unavailable.

Chemotherapy, a key component of the transplantation process, also has specific guidelines for administration, and thus a chemotherapy reference chart for nurses was created. This includes information about preparing, administering, and disposing, as well as educational information that the nurse can provide to the patient. Decreasing medication errors, avoiding medication incompatibilities, and managing time are all essential components of the nursing responsibilities during the BMT process. The quick-reference compatibility chart and the chemotherapy reference chart have proven effective based on the initial informal response from the nursing staff.

306

PEDIATRIC BLOOD AND MARROW TRANSPLANTATION: A ROADMAP TO SCHOOL REENTRY

Fisher, V.L.[1,2], Rauhe, M.[2] [1]Rainbow Babies and Children's Hospital, Cleveland, OH; [2]Ireland Cancer Center, Cleveland, OH.

Children who have undergone blood and marrow transplantation (BMT) face many challenges. Often, the physical challenges become the primary focus of the posttransplantation phase, and the emotional and psychosocial needs of childhood, a time of growth and discovery, are often overlooked. Posttransplantation, the child is often unable to attend school, which can leave the child feeling isolated and unsupported. Developing a posttransplantation treatment plan that addresses all aspects of the child's life is of the utmost importance. School attendance provides the opportunity for the child to achieve the social, emotional, and academic milestones necessary to his or her development. Attending school gives the child a sense of hope and purpose. The development of a formal school reentry program enables the pediatric BMT team to effectively address the many psychosocial needs of the transplantation patient. The purpose of the program is to provide education about the transplantation process to teachers, school nurses, classmates, and other school members with the goal of increasing awareness and understanding and alleviating any fears and misconceptions that may exist. The expected outcome is to have an increased level of support from the posttransplantation child's peers and school personnel, and facilitation of a smooth reentry into school posttransplantation.

307

NURSE RETENTION IN THE BMT SETTING: ONE POSSIBLE SOLUTION

Clegg, C.E. University of Texas M.D. Anderson Cancer Center, Houston, TX.

Nurse retention is key in providing excellent nursing care. An emerging concept to improve the retention rate for inpatient nurses is to allow each nursing staff member to submit a written request for their specific work schedule. The requests are then compiled by an elected committee of peers, who attempt to provide adequate staffing for a 52-bed inpatient unit. The committee is made up of 5 clinical RNs, 1 inpatient service coordinator (ISC), and 1 nursing assistant. The main objective of the committee is to provide adequate staffing for a 4-week period for all of the nursing entities on the BMT inpatient unit.

The process of staffing involves 3 steps. The first step requires input from each nursing staff member, each ISC, and each nurse assistant. The second step of the process involves the tedious task of compiling all of the requests and successfully staffing the floor for a 4-week period. The third step of the process falls back on the responsibility of the staff to view the posted schedule and then make trades with other staff. Each staff member is provided the opportunity for accountability and responsibility for their work schedule.

Maintaining professional relationships between the committee members, management, and the nursing staff is another objective of the self-scheduling process. Communication, fairness, maturity, and patience are key aspects to the scheduling process. Many unforeseen problems occur in the process and are dealt with accordingly. Guidelines were designed and implemented to create a positive attitude and an atmosphere of fairness and teamwork. Measurement of the success of the committee process is also addressed. Through self-scheduling, nursing staff members can experience more flexibility and autonomy.

308

ALTERNATIVE MANAGEMENT OF HEMORRHAGIC CYSTITIS WITH HYPERBARIC OXYGEN THERAPY AND ACTIVATED FACTOR VII IN THE ALLOGENEIC BMT PATIENT

Tischhauser, T., Denning, A.J., Neumann, J. University of Texas M.D. Anderson Cancer Center, Houston, TX.

Hemorrhagic cystitis (HC) is a common complication after allogeneic BMT, occurring in 16%-40% of this patient population. In the allogeneic bone marrow transplantation (BMT) patient, the syndrome can occur early or late during the transplantation process and can have a significant impact on morbidity. Numerous risk factors can contribute to an increased likelihood of HC. These risk factors include chemotherapy, total body irradiation (TBI), type of BMT, and viral infection. This last risk factor being the most frequent contributing factor. Because of these risk factors, it is essential that the clinical nurse caring for these patients be knowledgeable regarding the symptomology and treatment options necessary in successful management of this challenging complication.

At our comprehensive cancer center, where more than 500 BMT patients are treated and cared for each year, the unit-based Clinical Practice Council has developed a standard of care for hemorrhagic cystitis that identifies nursing practice guidelines. These interven-